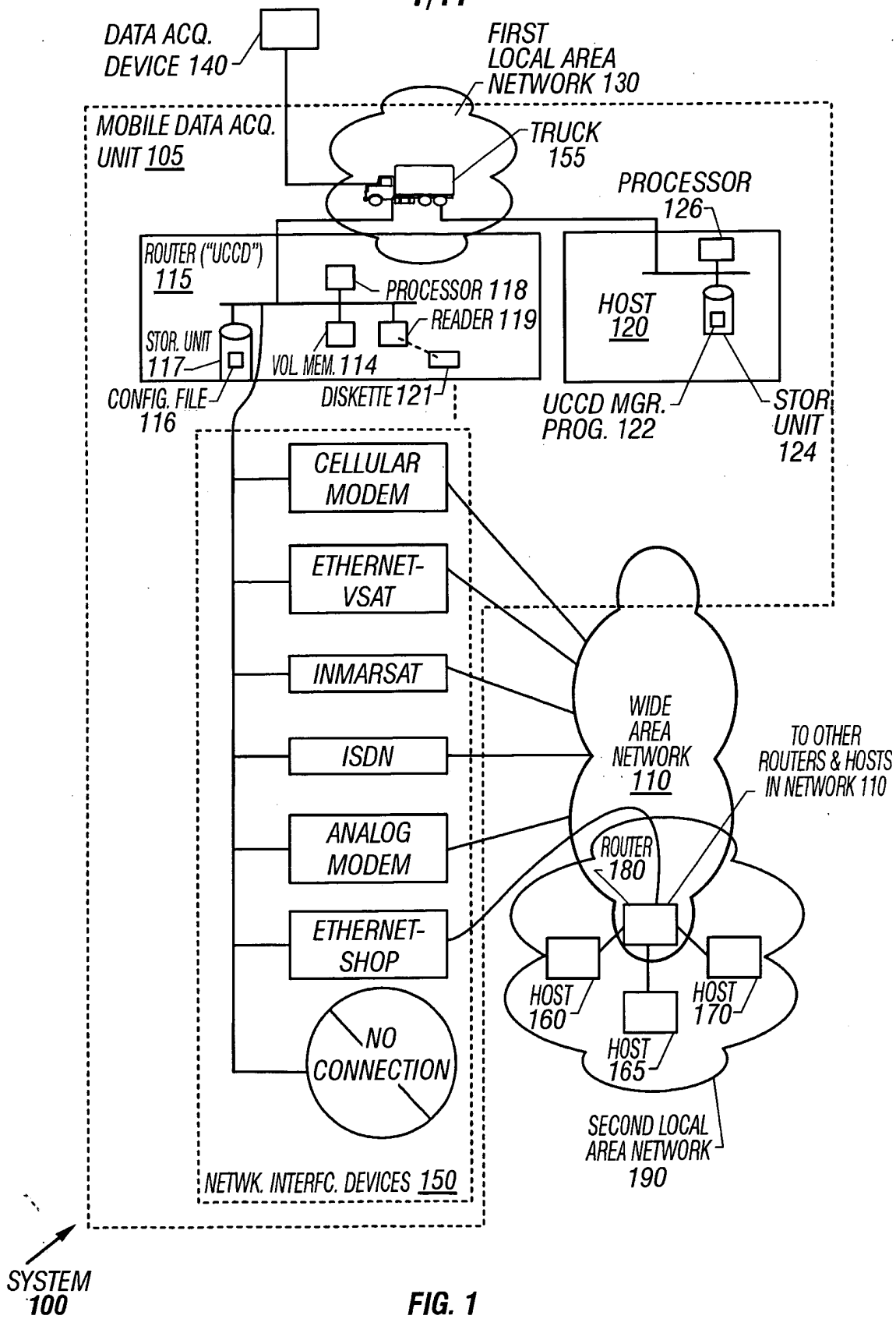
DATA ACQ. DEVICE 140
FIRST LOCAL AREA NETWORK 130
MOBILE DATA ACQ. UNIT 105
TRUCK 155
PROCESSOR 126
ROUTER ("UCCD") 115
PROCESSOR 118
READER 119
HOST 120
STOR. UNIT 117
VOL. MEM. 114
CONFIG. FILE 116
DISKETTE 121
UCCD MGR. PROG. 122
STOR. UNIT 124
CELLULAR MODEM
ETHERNET-VSAT
INMARSAT
ISDN
ANALOG MODEM
ETHERNET-SHOP
NO CONNECTION
WIDE AREA NETWORK 110
TO OTHER ROUTERS & HOSTS IN NETWORK 110
ROUTER 180
HOST 160
HOST 165
HOST 170
SECOND LOCAL AREA NETWORK 190
NETWK. INTERFC. DEVICES 150
SYSTEM 100

FIG. 1

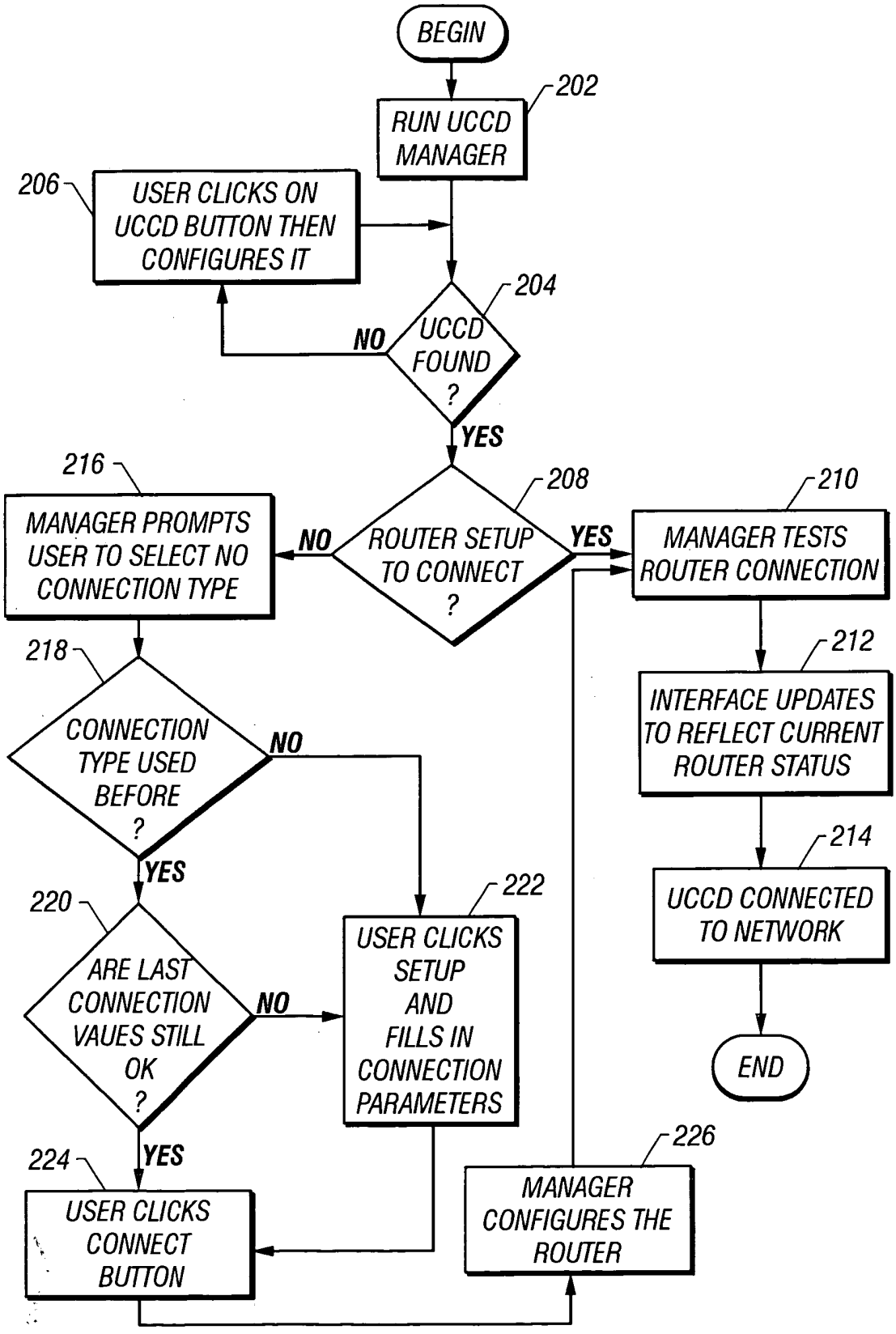
BEGIN
202
RUN UCCD MANAGER
206
USER CLICKS ON UCCD BUTTON THEN CONFIGURES IT
204
UCCD FOUND ?
NO
YES
216
MANAGER PROMPTS USER TO SELECT NO CONNECTION TYPE
208
ROUTER SETUP TO CONNECT ?
NO
YES
210
MANAGER TESTS ROUTER CONNECTION
212
INTERFACE UPDATES TO REFLECT CURRENT ROUTER STATUS
214
UCCD CONNECTED TO NETWORK
END
218
CONNECTION TYPE USED BEFORE ?
NO
YES
220
ARE LAST CONNECTION VAUES STILL OK ?
NO
YES
222
USER CLICKS SETUP AND FILLS IN CONNECTION PARAMETERS
224
USER CLICKS CONNECT BUTTON
226
MANAGER CONFIGURES THE ROUTER

FIG. 2

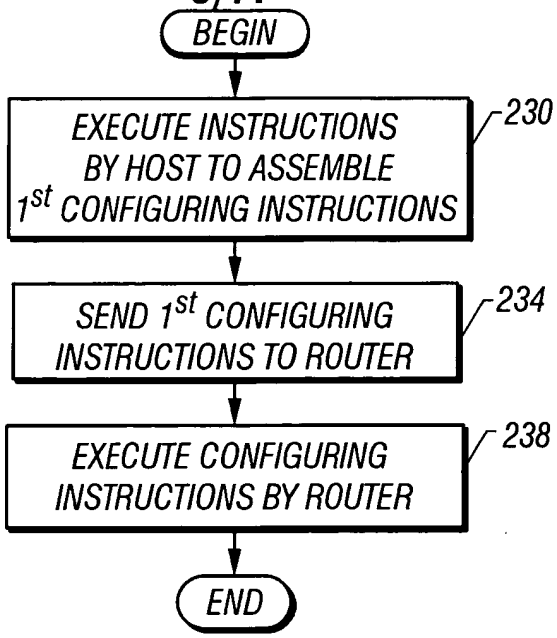
BEGIN
EXECUTE INSTRUCTIONS BY HOST TO ASSEMBLE 1st CONFIGURING INSTRUCTIONS
230
SEND 1st CONFIGURING INSTRUCTIONS TO ROUTER
234
EXECUTE CONFIGURING INSTRUCTIONS BY ROUTER
238
END

FIG. 2B

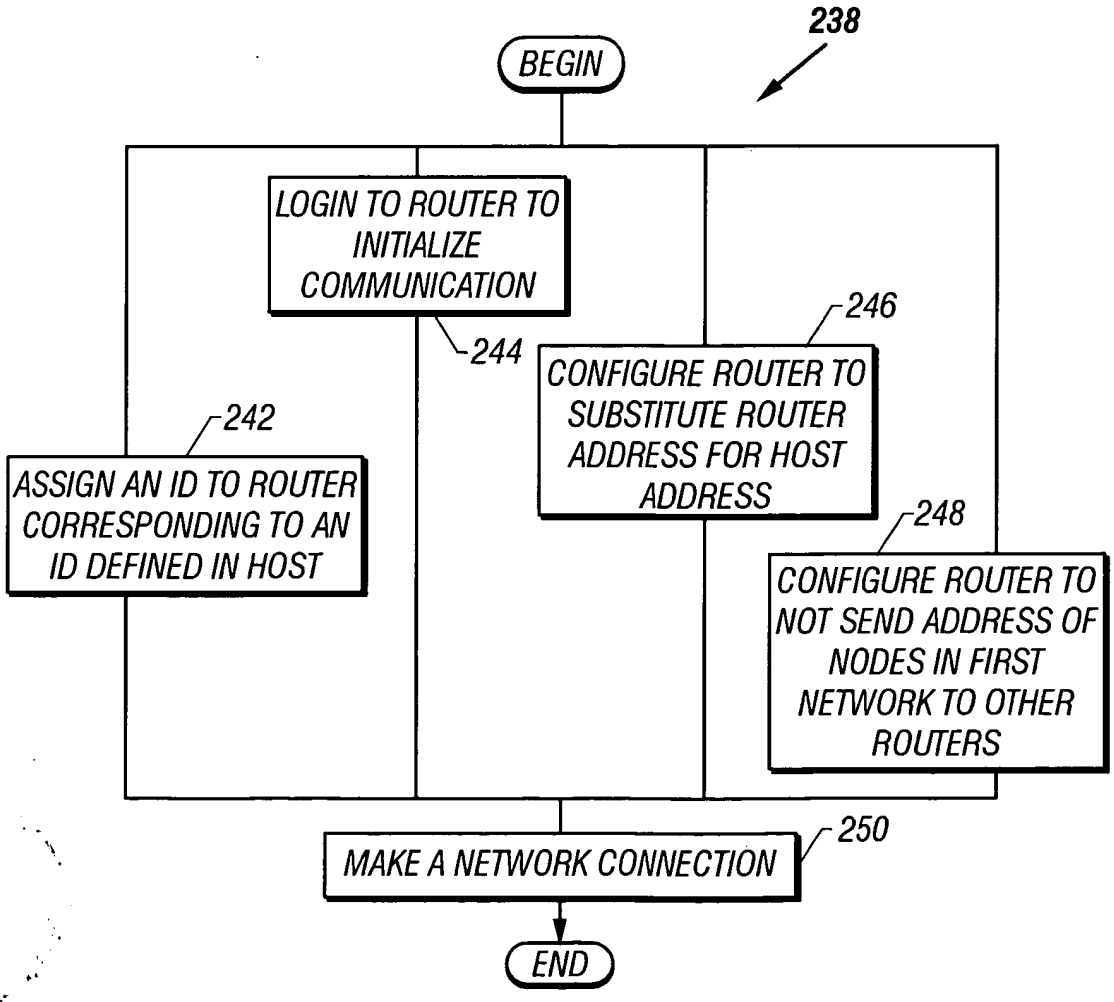
238
BEGIN
LOGIN TO ROUTER TO INITIALIZE COMMUNICATION
244
246
CONFIGURE ROUTER TO SUBSTITUTE ROUTER ADDRESS FOR HOST ADDRESS
242
ASSIGN AN ID TO ROUTER CORRESPONDING TO AN ID DEFINED IN HOST
248
CONFIGURE ROUTER TO NOT SEND ADDRESS OF NODES IN FIRST NETWORK TO OTHER ROUTERS
MAKE A NETWORK CONNECTION
250
END

FIG. 2C

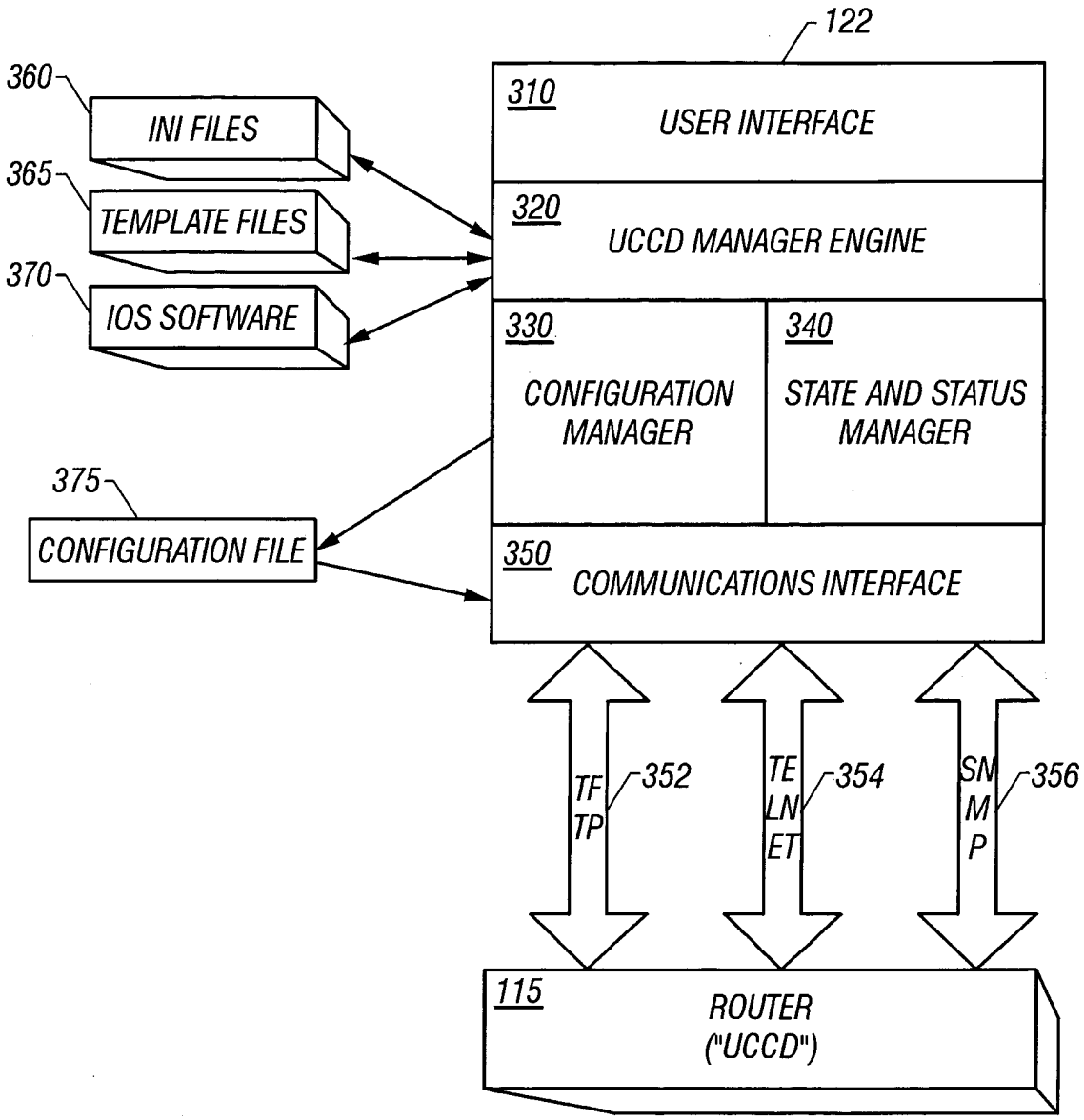
122
360
INI FILES
365
TEMPLATE FILES
370
IOS SOFTWARE
310
USER INTERFACE
320
UCCD MANAGER ENGINE
330
CONFIGURATION MANAGER
340
STATE AND STATUS MANAGER
375
CONFIGURATION FILE
350
COMMUNICATIONS INTERFACE
TF TP
352
TE LN ET
354
SN M P
356
115
ROUTER ("UCCD")

FIG. 3

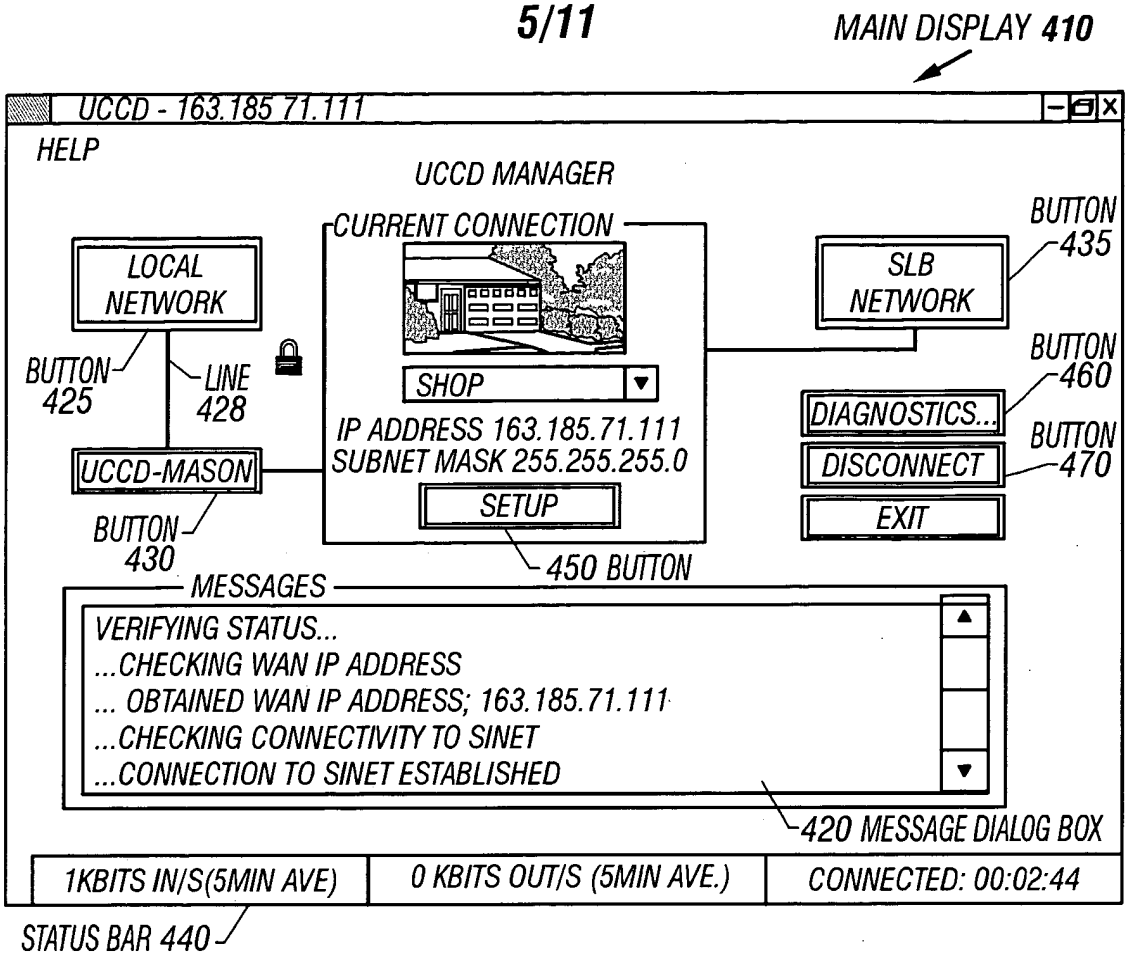
MAIN DISPLAY 410
UCCD - 163.185 71.111
HELP
UCCD MANAGER
CURRENT CONNECTION
LOCAL NETWORK
BUTTON 425
LINE 428
UCCD-MASON
BUTTON 430
SHOP
IP ADDRESS 163.185.71.111
SUBNET MASK 255.255.255.0
SETUP
450 BUTTON
SLB NETWORK
BUTTON 435
BUTTON 460
DIAGNOSTICS...
BUTTON 470
DISCONNECT
EXIT
MESSAGES
VERIFYING STATUS...
...CHECKING WAN IP ADDRESS
... OBTAINED WAN IP ADDRESS; 163.185.71.111
...CHECKING CONNECTIVITY TO SINET
...CONNECTION TO SINET ESTABLISHED
420 MESSAGE DIALOG BOX
1KBITS IN/S(5MIN AVE)
0 KBITS OUT/S (5MIN AVE.)
CONNECTED: 00:02:44
STATUS BAR 440

FIG. 4

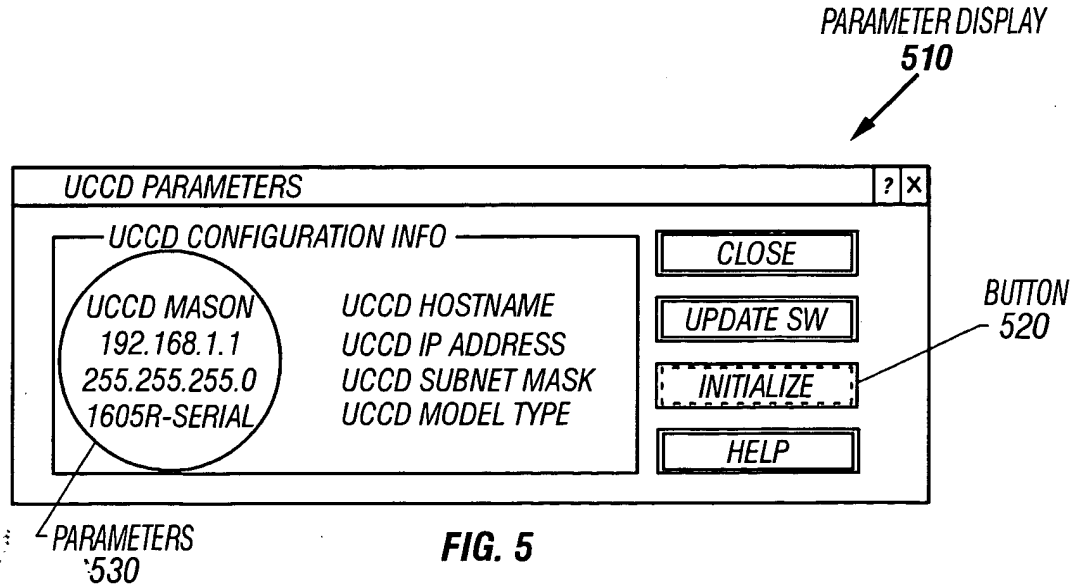
PARAMETER DISPLAY 510
UCCD PARAMETERS
UCCD CONFIGURATION INFO
UCCD MASON
192.168.1.1
255.255.255.0
1605R-SERIAL
UCCD HOSTNAME
UCCD IP ADDRESS
UCCD SUBNET MASK
UCCD MODEL TYPE
CLOSE
UPDATE SW
INITIALIZE
HELP
BUTTON 520
PARAMETERS 530

FIG. 5

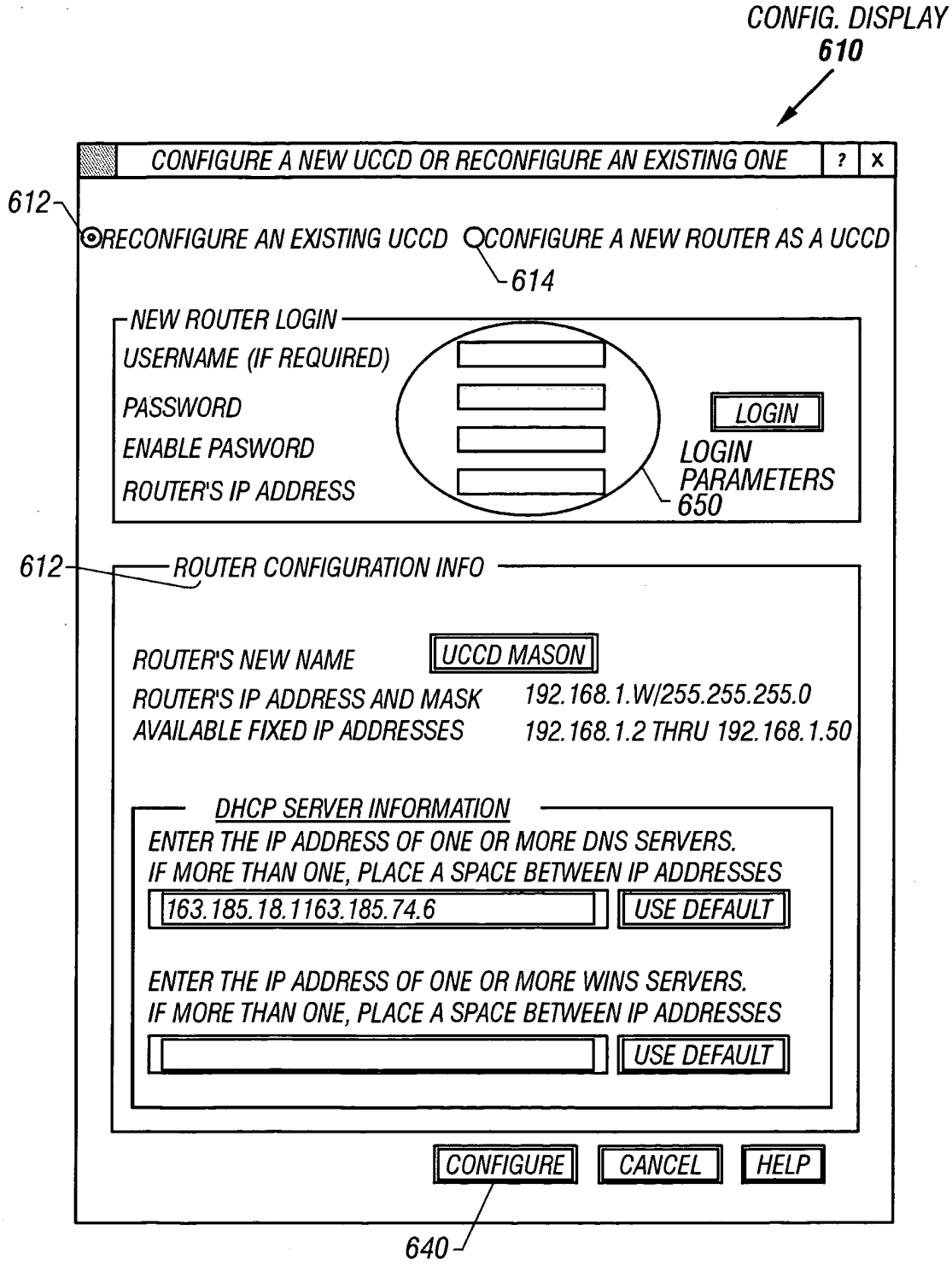
CONFIG. DISPLAY
610
CONFIGURE A NEW UCCD OR RECONFIGURE AN EXISTING ONE
?
X
612
RECONFIGURE AN EXISTING UCCD
CONFIGURE A NEW ROUTER AS A UCCD
614
NEW ROUTER LOGIN
USERNAME (IF REQUIRED)
PASSWORD
ENABLE PASWORD
ROUTER'S IP ADDRESS
LOGIN
LOGIN PARAMETERS
650
612
ROUTER CONFIGURATION INFO
ROUTER'S NEW NAME
UCCD MASON
ROUTER'S IP ADDRESS AND MASK
192.168.1.W/255.255.255.0
AVAILABLE FIXED IP ADDRESSES
192.168.1.2 THRU 192.168.1.50
DHCP SERVER INFORMATION
ENTER THE IP ADDRESS OF ONE OR MORE DNS SERVERS.
IF MORE THAN ONE, PLACE A SPACE BETWEEN IP ADDRESSES
163.185.18.1163.185.74.6
USE DEFAULT
ENTER THE IP ADDRESS OF ONE OR MORE WINS SERVERS.
IF MORE THAN ONE, PLACE A SPACE BETWEEN IP ADDRESSES
USE DEFAULT
CONFIGURE
CANCEL
HELP
640

FIG. 6

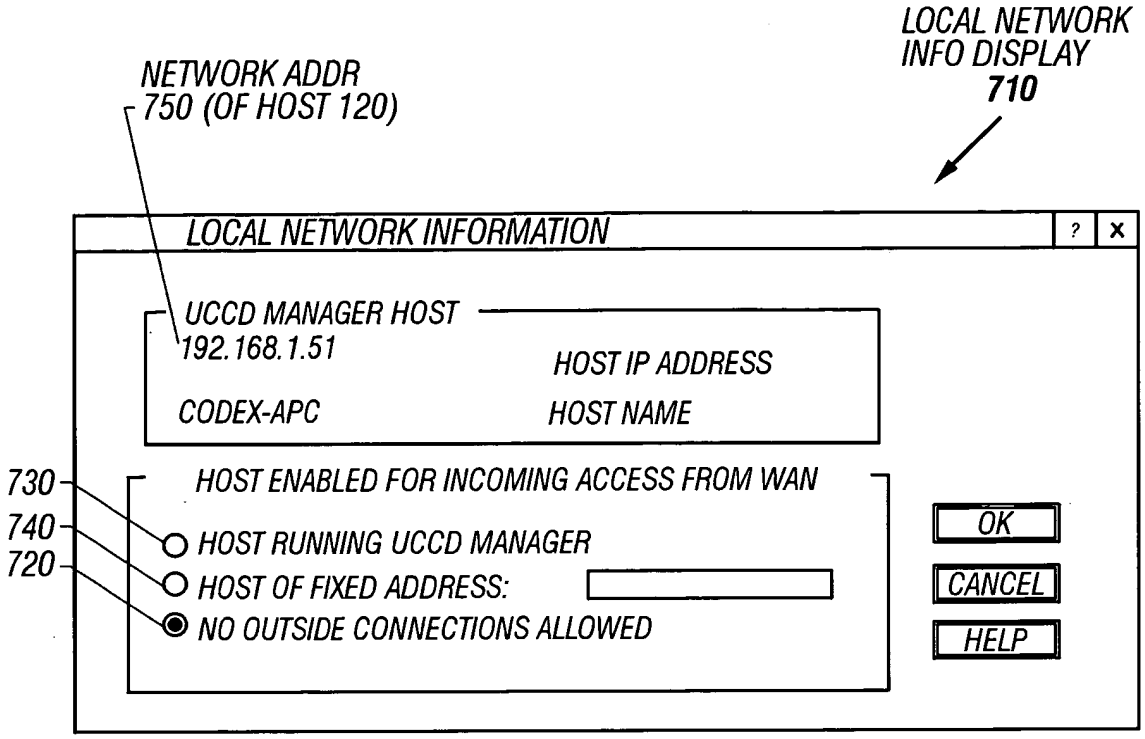
LOCAL NETWORK INFO DISPLAY
710
NETWORK ADDR
750 (OF HOST 120)
LOCAL NETWORK INFORMATION
?
X
UCCD MANAGER HOST
192.168.1.51
HOST IP ADDRESS
CODEX-APC
HOST NAME
730
740
720
HOST ENABLED FOR INCOMING ACCESS FROM WAN
HOST RUNNING UCCD MANAGER
HOST OF FIXED ADDRESS:
NO OUTSIDE CONNECTIONS ALLOWED
OK
CANCEL
HELP

FIG. 7

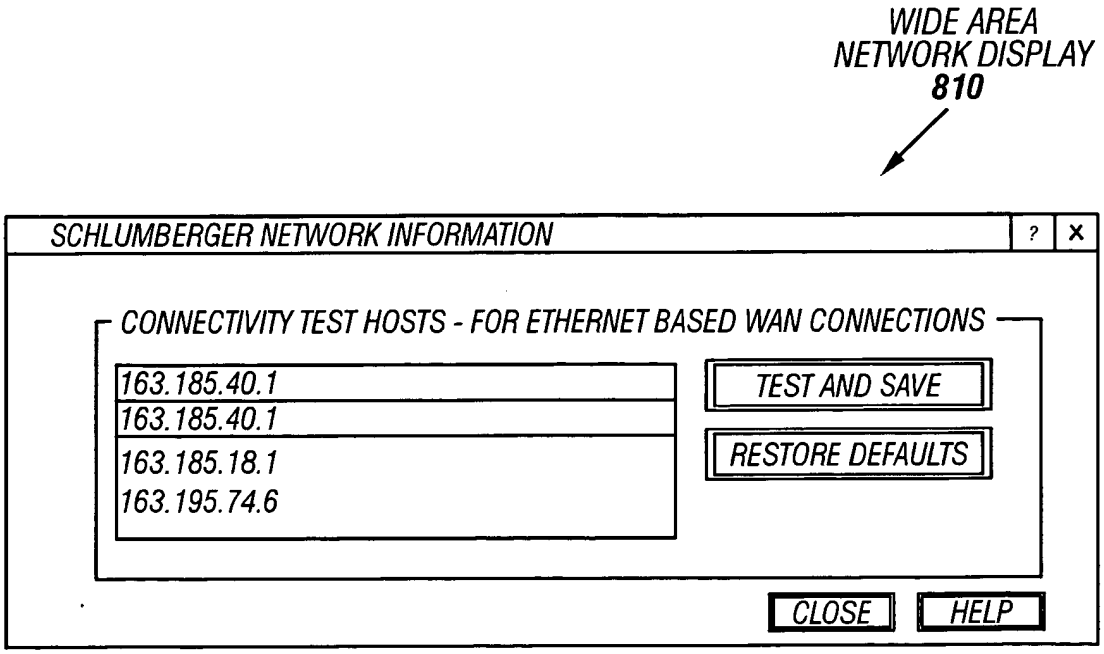
WIDE AREA NETWORK DISPLAY
810
SCHLUMBERGER NETWORK INFORMATION
?
X
CONNECTIVITY TEST HOSTS - FOR ETHERNET BASED WAN CONNECTIONS
163.185.40.1
163.185.40.1
163.185.18.1
163.195.74.6
TEST AND SAVE
RESTORE DEFAULTS
CLOSE
HELP

FIG. 8

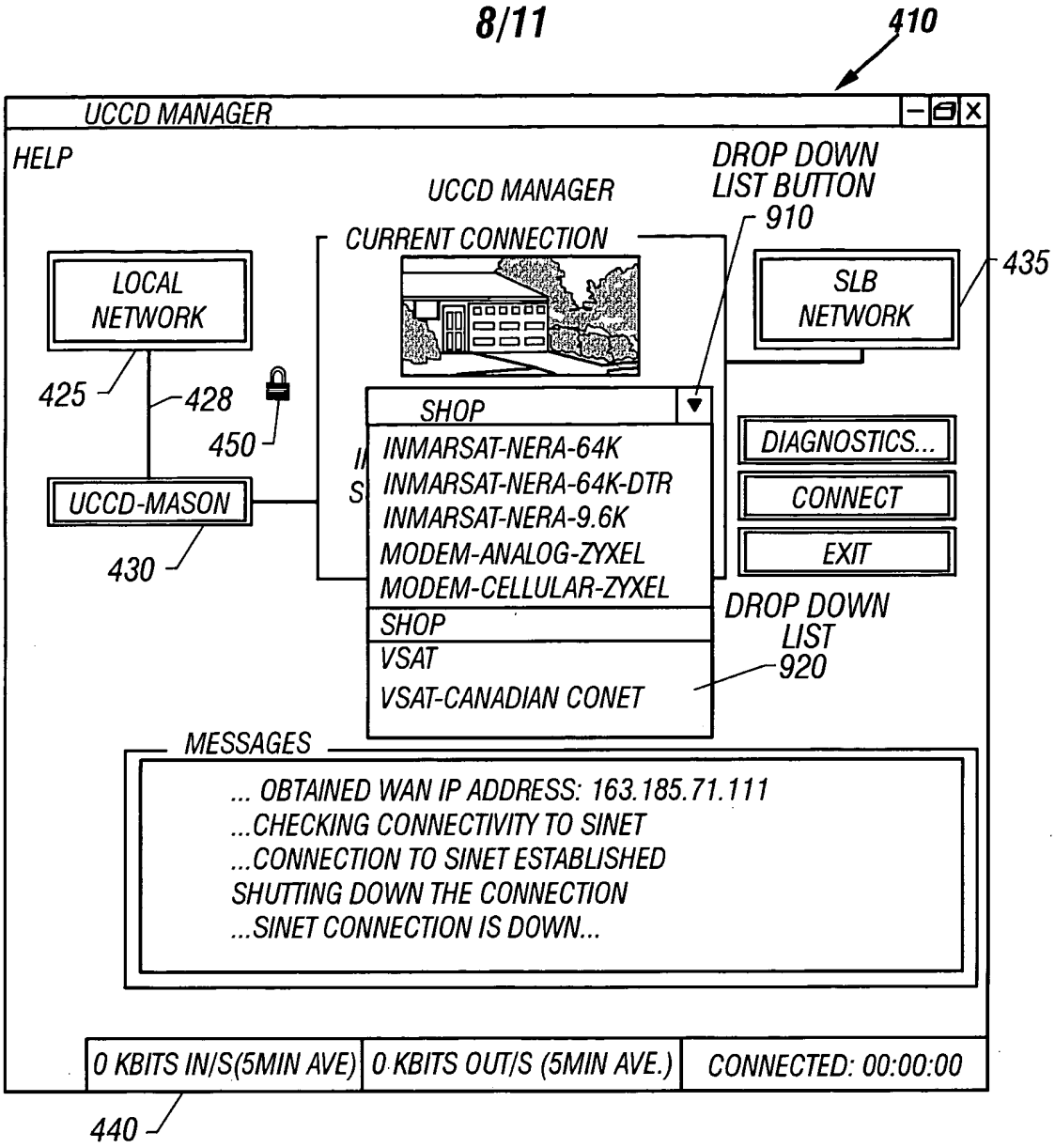
410
UCCD MANAGER
HELP
UCCD MANAGER
DROP DOWN LIST BUTTON
910
CURRENT CONNECTION
LOCAL NETWORK
SLB NETWORK
435
425
428
450
SHOP
INMARSAT-NERA-64K
INMARSAT-NERA-64K-DTR
INMARSAT-NERA-9.6K
MODEM-ANALOG-ZYXEL
MODEM-CELLULAR-ZYXEL
DIAGNOSTICS...
CONNECT
EXIT
UCCD-MASON
430
SHOP
VSAT
VSAT-CANADIAN CONET
DROP DOWN LIST
920
MESSAGES
... OBTAINED WAN IP ADDRESS: 163.185.71.111
...CHECKING CONNECTIVITY TO SINET
...CONNECTION TO SINET ESTABLISHED
SHUTTING DOWN THE CONNECTION
...SINET CONNECTION IS DOWN...
0 KBITS IN/S(5MIN AVE)
0 KBITS OUT/S (5MIN AVE.)
CONNECTED: 00:00:00
440

FIG. 9

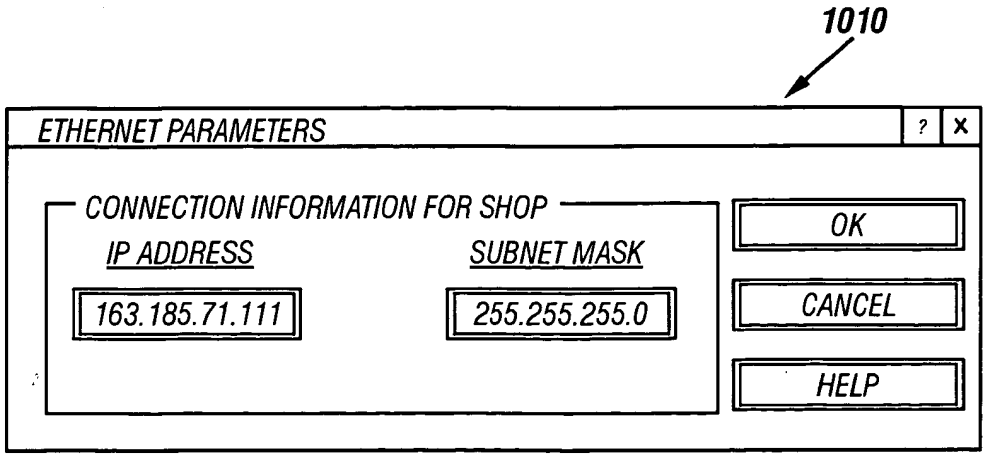
1010
ETHERNET PARAMETERS
?
CONNECTION INFORMATION FOR SHOP
IP ADDRESS
SUBNET MASK
163.185.71.111
255.255.255.0
OK
CANCEL
HELP

FIG. 10

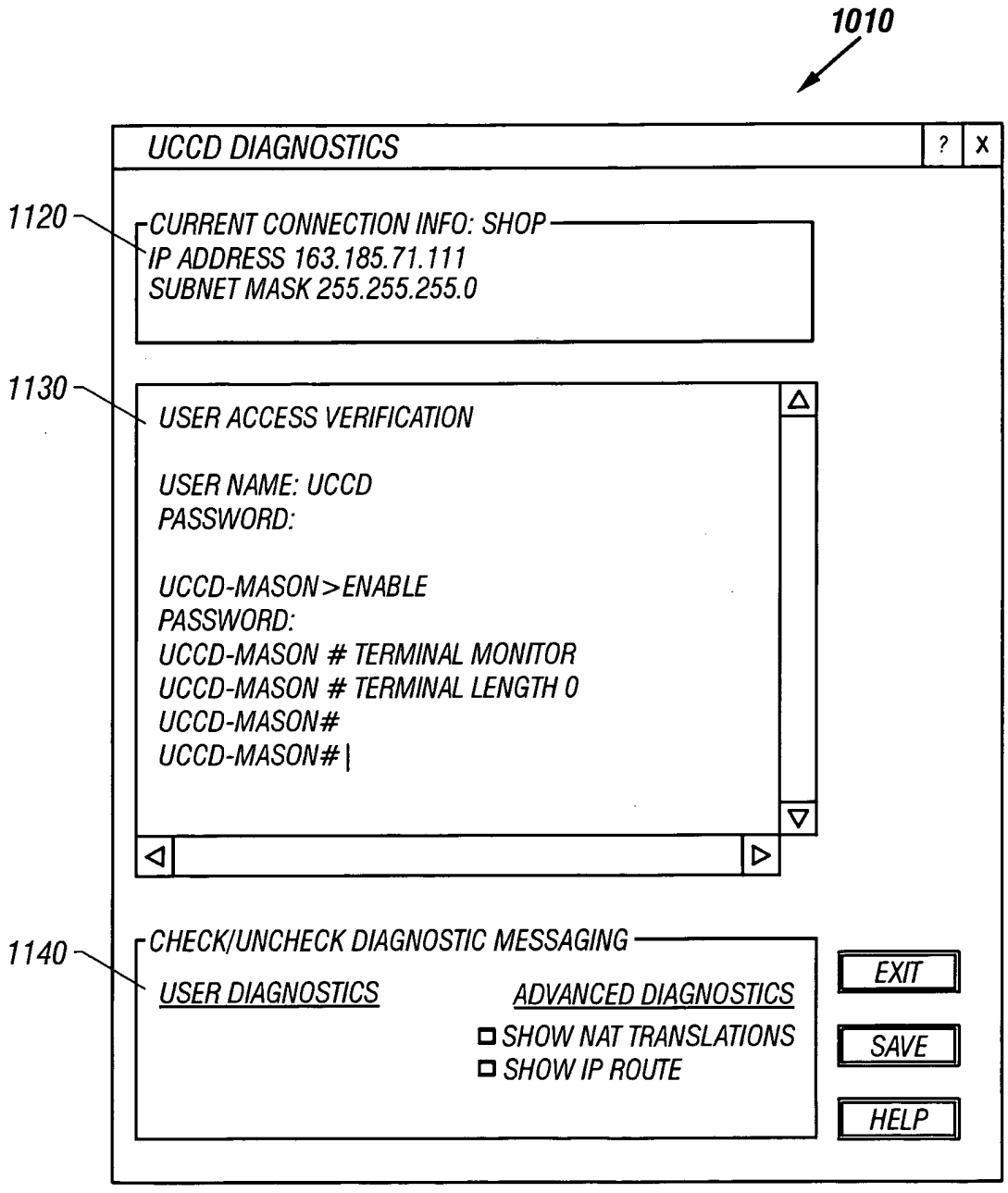
1010
UCCD DIAGNOSTICS
?
X
1120
CURRENT CONNECTION INFO: SHOP
IP ADDRESS 163.185.71.111
SUBNET MASK 255.255.255.0
1130
USER ACCESS VERIFICATION
USER NAME: UCCD
PASSWORD:
UCCD-MASON>ENABLE
PASSWORD:
UCCD-MASON # TERMINAL MONITOR
UCCD-MASON # TERMINAL LENGTH 0
UCCD-MASON#
UCCD-MASON#
1140
CHECK/UNCHECK DIAGNOSTIC MESSAGING
USER DIAGNOSTICS
ADVANCED DIAGNOSTICS
SHOW NAT TRANSLATIONS
SHOW IP ROUTE
EXIT
SAVE
HELP

FIG. 11

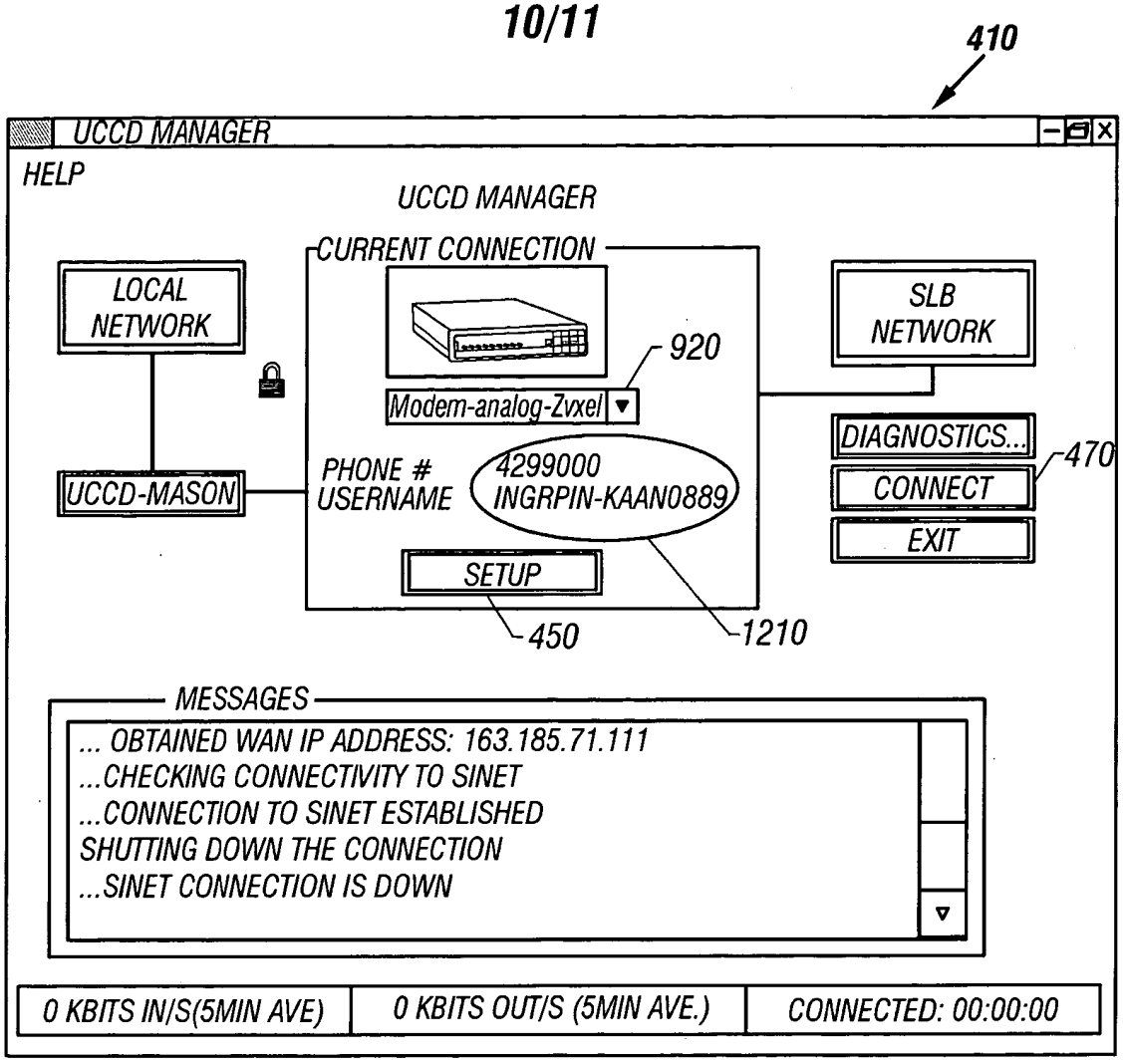
410
UCCD MANAGER
HELP
UCCD MANAGER
CURRENT CONNECTION
LOCAL NETWORK
SLB NETWORK
920
Modem-analog-Zvxel
DIAGNOSTICS...
470
CONNECT
EXIT
UCCD-MASON
PHONE #
USERNAME
4299000
INGRPIN-KAAN0889
SETUP
450
1210
MESSAGES
... OBTAINED WAN IP ADDRESS: 163.185.71.111
...CHECKING CONNECTIVITY TO SINET
...CONNECTION TO SINET ESTABLISHED
SHUTTING DOWN THE CONNECTION
...SINET CONNECTION IS DOWN
0 KBITS IN/S(5MIN AVE)
0 KBITS OUT/S (5MIN AVE.)
CONNECTED: 00:00:00

FIG. 12

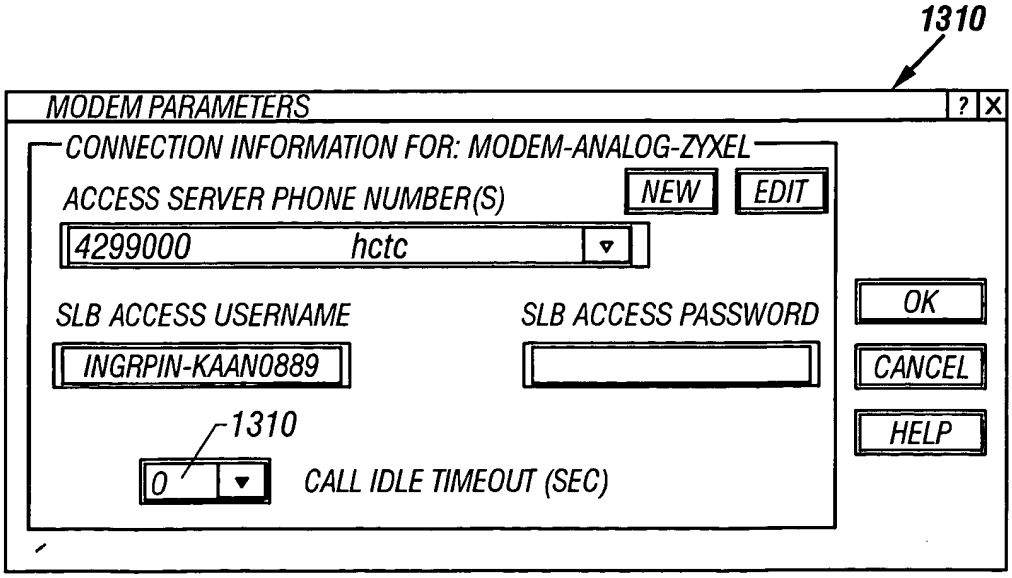
1310
MODEM PARAMETERS
CONNECTION INFORMATION FOR: MODEM-ANALOG-ZYXEL
ACCESS SERVER PHONE NUMBER(S)
NEW
EDIT
4299000
hctc
SLB ACCESS USERNAME
SLB ACCESS PASSWORD
INGRPIN-KAAN0889
OK
CANCEL
HELP
1310
0
CALL IDLE TIMEOUT (SEC)

FIG. 13

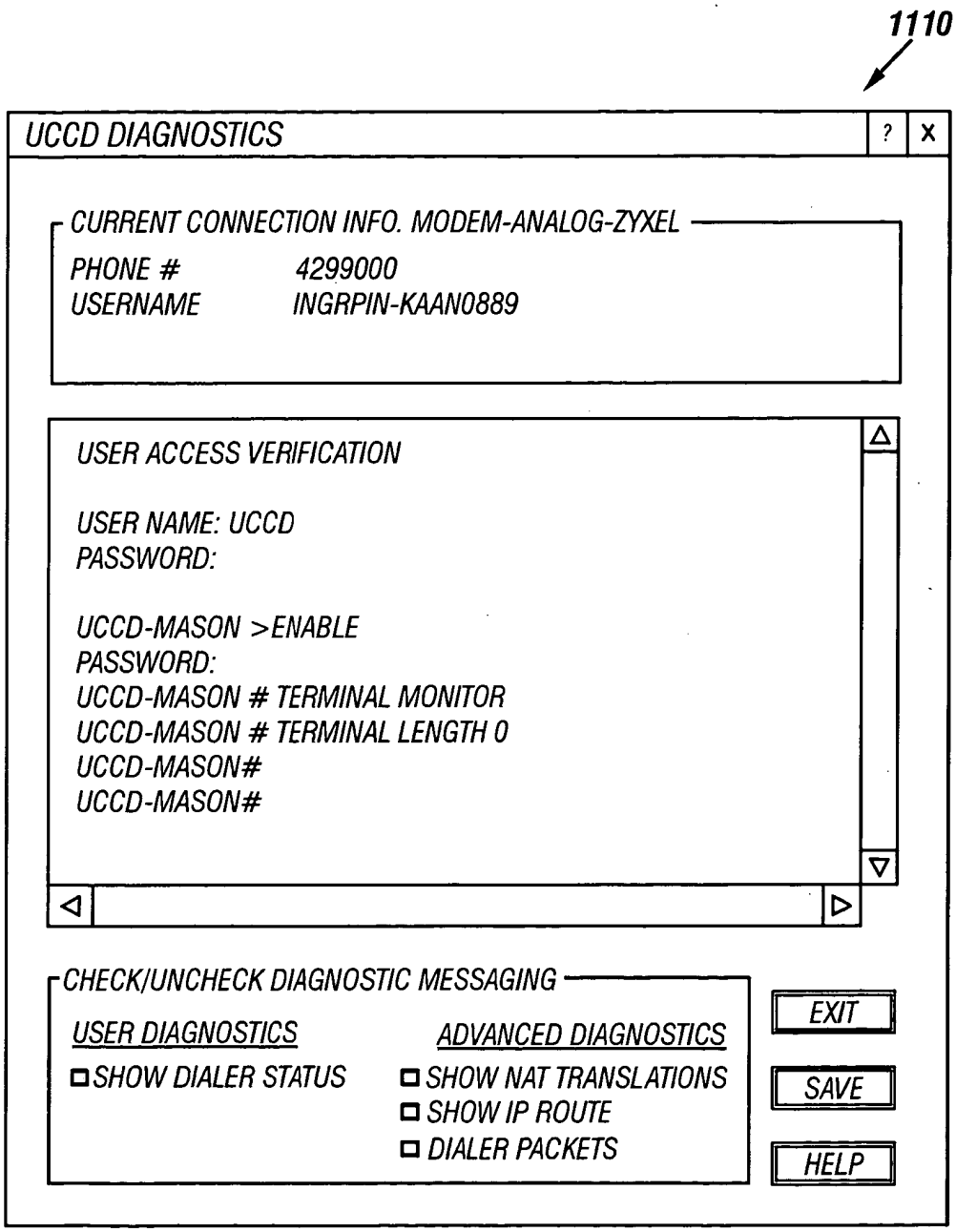
1110
UCCD DIAGNOSTICS
?
X
CURRENT CONNECTION INFO. MODEM-ANALOG-ZYXEL
PHONE # 4299000
USERNAME INGRPIN-KAAN0889
USER ACCESS VERIFICATION
USER NAME: UCCD
PASSWORD:
UCCD-MASON >ENABLE
PASSWORD:
UCCD-MASON # TERMINAL MONITOR
UCCD-MASON # TERMINAL LENGTH 0
UCCD-MASON#
UCCD-MASON#
CHECK/UNCHECK DIAGNOSTIC MESSAGING
USER DIAGNOSTICS
SHOW DIALER STATUS
ADVANCED DIAGNOSTICS
SHOW NAT TRANSLATIONS
SHOW IP ROUTE
DIALER PACKETS
EXIT
SAVE
HELP

FIG. 14